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09/751,971

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EXAMINER

HOM, SHICK C

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/751,971

Applicant(s)

PAPADIMITRIOU ET AL.

Examiner

Shick C Hom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

2. Claims 3-5, 8-9, and 34-38 are objected to because of the following informalities: In claims 3-5, insert period at the end of the sentence. In claims 8 and 9 line 2 spell out acronym, i.e. delete "SGSN" and "VLR" and insert --- serving GPRS (General Packet Radio Service) support node SGSN--- and ---Visitor Location Registry VLR---, respectively. In claim 34 line 2 delete "said program" and insert ---said computer program--- as in claim 34 line 3 for consistency. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 1-20, 25, and 34-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to

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particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 line 10 and claim 34 line 9 which recite "the second database" lacks clear antecedent basis because no second database have been previously recited in the claims and therefore the limitation is not clearly understood. In claims 13 and 15 lines 1-2 which recite "the one or more messages received by the second database" lacks clear antecedent basis. In claim 17 line 6 which recite "the one or more messages sent by the first database" lacks clear antecedent basis. In claim 25 line 2 which recite "the second database record" and "the first database number" lack clear antecedent basis. In claim 36 lines 2-3 which recite "the code segment for sending one or more messages to the first database" is not clear as to whether it is reciting ---a code segment for sending one or more messages to the first database---. In claim 37 lines 1-2 which recite "the code segment" lacks clear antecedent basis and is not clear as to whether it should depend from claim 35 rather than claim 34.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

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1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-11, 16-17, 20-22, and 24-42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17-32 of U.S. Patent No. 6,731,932. Although the conflicting claims are not identical, they are not patentably distinct from each other because the application's claim 1 merely broaden the scope of the U.S. Patent No. 6,732,932 claims 17-18, 26, and 31-32 by eliminating the means for determining whether the subscriber profile needs updating; means for determining whether conditions for updating the subscriber profile stored in the visitor network entity are met; and wherein the home location entity and the visitor network entity correspond to the first database and the second database, respectively, now recite in claim 1. Likewise, application's claims 2-3 merely broaden the scope of U.S. Patent No. 6,731,932 claim 31-32 because they recite the home location register and visitor location register, respectively, and they depend from claim 17. Application's

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claims 4-5 merely broaden the scope of U.S. Patent No. 6,731,932 claim 26 because it recites sending message to the home network entity and it depends from claim 17. Application's claims 6-9 merely broaden the scope of U.S. Patent No. 6,731,932 claims 17 and 31-32 because they recite the previous visitor network entity, which corresponds to the third database being the visitor location register in the old service area, the SGSN and VLR located in the old service area as recited claims 17 and 31-32, respectively. Application's claims 10-11 and 20 merely broaden the scope of U.S. Patent No. 6,731,932 claim 17 because claim 17 recites receiving an update location request at the network entity and receiving an update location request at a new visitor network entity serving an area into which the subscriber has roamed from an area served by a previous visitor network entity clearly anticipate the subscriber data being an update location signals and the messages received from the mobile station being a routing area update request signals as in claims 10 and 11, and wherein the mobile station is roaming from an old to a new service areas as in claim 20, respectively.

Application's claims 16-17 merely broaden the scope of U.S. Patent No. 6,731,932 claims 17, 23-24, and 26 because claim 26 recite sending to the home network entity a restore message if the subscriber profile cannot be retrieved from the previous

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visitor network entity clearly anticipate the communicating messages between the first and third database. Likewise, the application's claims 21-22 and 24-42 merely broaden the scope of U.S. Patent No. 6,731,932 claims 17-32 by eliminating the means for determining whether the subscriber profile needs updating; means for determining whether conditions for updating the subscriber profile stored in the visitor network entity are met; and wherein the home location entity and the visitor network entity correspond to the first database and the second database. It has been held that the omission of a element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ (CCPA). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the

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invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-5, 10-11, 20-21, 26-27, 28-36, 39, and 41-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Forslow (2003/0039237).

Regarding claim 1:

Forslow discloses the method of managing subscriber data in a telecommunications system, wherein said telecommunications system comprises a first switch for providing circuit switching services and a second switch for providing packet switching services, said method comprising the steps of: receiving one or more messages from a mobile station; requesting the subscriber data from a first database, wherein the subscriber data includes circuit switching data and packet switching data; receiving the subscriber data from the first database; and storing the subscriber data in the second database (see paragraphs 0010-0011, which recite the subscriber data in the HLR database and the visitor location register VLR database whereby the VLR requests and receives data about the roaming mobile station from the HLR and stores it clearly anticipate the corresponding first and second database for storing subscriber data, the step of receiving messages from the mobile station requesting subscriber

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data from a first database; receiving and storing subscriber data from the first database in the second database as claimed) wherein the second database is communicably coupled to the first switch for providing circuit switching services to the mobile station, and is communicably coupled to the second switch for providing packet switching services to the mobile station (see abstract and paragraph 0075 which recite the mobile station being connected via a circuit switch and/or a packet switch as instructed using subscription information from the HLR database clearly anticipate the first switch and second switch for providing circuit and packet switching services to the mobile station, respectively).

Regarding claim 21:

Forslow discloses the method of restoring subscriber data of a mobile station in one or more network devices comprising the steps of: connecting a circuit switching network device and a packet switching network device to a first database of subscriber data, said first database storing both circuit switching data and packet switching data (see abstract and paragraph 0075 which recite the mobile station being connected via a circuit switch and/or a packet switch as instructed using subscription information from the HLR database clearly anticipate the first database storing both circuit and packet

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switching data); setting one or more indicators in the first database to indicate whether a location area identity stored in the first database for the mobile station is confirmed by radio contact; receiving a request in the first database from the circuit switching network device or the packet switching network device to restore the subscriber data to the requesting network device; coordinating with at least a second database to make the subscriber data consistent (see paragraphs 0010-0011, which recite the subscriber data in the HLR database and the visitor location register VLR database whereby the VLR requests and receives data about the roaming mobile station from the HLR and stores it clearly anticipate the corresponding first and second database for storing subscriber data, the step of receiving messages from the mobile station requesting subscriber data from a first database; receiving and storing subscriber data from the first database in the second database as claimed), and restoring the subscriber data to the requesting network device if the indicators indicate that the location area identity stored in the first database for the mobile station is confirmed by radio contact (see paragraphs 0103-0105 which recite the use of an acknowledgment message and authentication parameters clearly reads on the steps of coordinating, restoring data, and confirming indicators by radio contact).

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Regarding claim 28:

Forslow discloses the telecommunications system comprising: a first database containing subscriber data of one or more mobile subscribers, wherein the subscriber data includes circuit switching data and packet switching data; a second database communicably linked to the first database, wherein the second database receives the subscriber data contained in the first database and stores the subscriber data for subscribers roaming within a service area covered by the second database (see paragraphs 0010-0011, which recite the subscriber data in the HLR database and the visitor location register VLR database whereby the VLR requests and receives data about the roaming mobile station from the HLR and stores it clearly anticipate the corresponding first and second database for storing subscriber data, the step of receiving messages from the mobile station requesting subscriber data from a first database; receiving and storing subscriber data from the first database in the second database as claimed); a circuit switching network devices device connected to the second database, said circuit switching network device providing circuit switching telecommunications services to the one or more mobile subscribers based upon the subscriber data; and a packet switching network device connected to the second database, said packet switching network device providing

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packet switching telecommunications services to the one or more mobile subscribers based upon the subscriber data (see abstract and paragraph 0075 which recite the mobile station being connected via a circuit switch and/or a packet switch as instructed using subscription information from the HLR database clearly anticipate the first switch and second switch for providing circuit and packet switching services to the mobile station, respectively).

Regarding claim 34:

Forslow discloses the computer program embodied on a computer readable medium, said program managing subscriber data in a telecommunications system, said computer program (see paragraph 0009 which recite the mobile communications system including the mobile host being a computer terminal clearly anticipate the computer program for managing subscriber data in a telecommunications system) comprising: a code segment for receiving one or more messages from a mobile station; a code segment for requesting the subscriber data from a first database, wherein the subscriber data includes circuit switching data and packet switching data; a code segment for receiving the subscriber data from the first database; and a code segment for storing the subscriber data in the second database (see paragraphs 0010-0011, which recite the subscriber

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data in the HLR database and the visitor location register VLR database whereby the VLR requests and receives data about the roaming mobile station from the HLR and stores it clearly anticipate the corresponding first and second database for storing subscriber data, the step of receiving messages from the mobile station requesting subscriber data from a first database; receiving and storing subscriber data from the first database in the second database as claimed), a code segment for providing the subscriber data from the second database to a circuit switching network device for providing; circuit switching services to one or more mobile stations; and a code segment for providing the subscriber data from the second database to a packet switching network device for providing packet switching services to one or more mobile stations (see abstract and paragraph 0075 which recite the mobile station being connected via a circuit switch and/or a packet switch as instructed using subscription information from the HLR database clearly anticipate the first switch and second switch for providing circuit and packet switching services to the mobile station, respectively).

Regarding claim 39:

Forslow discloses the computer program for restoring subscriber data of a mobile station in one or more network

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devices (see paragraph 0009 which recite the mobile communications system including the mobile host being a computer terminal clearly anticipate the computer program for restoring subscriber data of a mobile station) comprising: a code segment for connecting a circuit switching network device and a packet switching network device to a first database of subscriber data, said first database storing both circuit switching data and packet switching data (see abstract and paragraph 0075 which recite the mobile station being connected via a circuit switch and/or a packet switch as instructed using subscription information from the HLR database clearly anticipate code segment storing both circuit and packet switching services to the mobile station in a first database); a code segment for setting one or more indicators in the first database to indicate whether a location area identity stored in the first database for the mobile station is confirmed by radio contact; a code segment for receiving a request in the first database from the circuit switching network device or the packet switching network device to restore the subscriber data to the requesting network device; a code segment for coordinating with at least a second database to make the subscriber data consistent (see paragraphs 0010-0011, which recite the subscriber data in the HLR database and the visitor location register VLR database whereby the VLR

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requests and receives data about the roaming mobile station from the HLR and stores it clearly anticipate the corresponding first and second database for storing subscriber data, the step of receiving messages from the mobile station requesting subscriber data from a first database; receiving and storing subscriber data from the first database in the second database as claimed); and a code segment for restoring the subscriber data to the requesting network device if the indicators indicate that the location area identity stored in the first database for the mobile station is confirmed by radio contact (see paragraphs 0103-0105 which recite the use of an acknowledgment message and authentication parameters clearly reads on the steps of restoring data and confirming indicators by radio contact).

Regarding claims 2, 27, 30, 42:

Forslow discloses wherein the first database is a home location register (see paragraphs 0010-0011 which recite the HLR).

Regarding claims 3, 26, 31, 41:

Forslow discloses wherein the second database is a universal visitor location register located in a new or old service area (see paragraphs 0010-0011 which recite the VLR).

Regarding claim 5:

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Forslow discloses wherein the step of requesting the subscriber data from the first database comprises the step of sending one or more messages to the first database to request the subscriber data (see paragraph 0011).

Regarding claim 10:

Forslow discloses wherein the one or more messages being sent to the first database to request the subscriber data is an update location signal (see paragraphs 0010-0011).

Regarding claim 11:

Forslow discloses wherein the one or more messages received from the mobile station at the second database is a routing area update request signal (see paragraph 0013 which recite the HLR stores routing information).

Regarding claim 20:

Forslow discloses wherein the mobile station is roaming from an old service area to a new service area (see paragraph 0010 which recite the roaming mobile station).

Regarding claim 29:

Forslow discloses one or more service areas, wherein each service area includes one or more first databases, the second database, the circuit switching network device, and the packet switching network device (see paragraph 0010-0012 which recite the service areas, the HLR, VLR, packet and circuit switch).

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Regarding claim 32:

Forslow discloses wherein the circuit switching network device is a mobile switching centers center for providing circuit switching services to the one or more mobile subscribers (see paragraph 0009 which recite the mobile switching center connected to the circuit-switched network for mobile communications).

Regarding claim 33:

Forslow discloses wherein the packet switching network device is a signaling node for providing packet switching services to the one or more mobile subscribers (see paragraph 0005 which recite providing the packet-switched data services for mobile application).

Regarding claims 4 and 35:

Forslow discloses the step of a code segment for communicating one or more messages with one or more databases in response to the one or more messages from the mobile station (see paragraphs 0010-0011 which recite the databases for the mobile station).

Regarding claim 36:

Forslow discloses wherein the code segment for requesting the subscriber data from the first database comprises the code segment for sending one or more messages to the first database

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to request the subscriber data (see paragraphs 0010-0011 which the subscriber data and the databases).

Allowable Subject Matter

8. Claims 12-15 and 18-19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bharatia discloses terminal roaming operations between intergenerational wireless networks.

Mustajarvi et al. disclose routing area updating in packet radio network.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Monday to Friday with alternate Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH



DANGSTON
PRIMARY EXAMINER